Avstar Systems, LLC™

Louth VDCP Device Manager Version 1.0.2 Device Operation Guide

This addendum provides information on how to install and use the Avstar™ Newsroom Computer System (NRCS) Broadcast Control System™ (BCS) Device Manager (DM) for the Louth Video Disk Control Protocol (VDCP).

Preface

Who Should Use This Manual

This manual is written for journalists, producers, directors, writers, and various technical personnel using Avstar BCS in a broadcast newsroom.

About This Manual

This manual contains the following information:

Chapter 1, *Installing the BCS Louth VDCP Device Manager*

Chapter 2, Configuring the BCS Louth VDCP Device Manager

Chapter 3, Using the BCS Louth VDCP Device Manager

Appendix A, Louth VDCP DM Error Messages

Symbols and Conventions

This manual uses the following special symbols and conventions.

Structure of Text

Numbered lists, when the order of the primary items is important.

Alphabetical lists, when the order of secondary items is important.

Bulleted lists, when the order of primary items is unimportant.

Indented dashed lists, when the order of secondary items is unimportant.

Look here in the margin for tips and environment-specific information.

In the margin you will find tips that help you perform tasks more easily and efficiently. You will also find information specific to a particular operating environment.

A note provides important related information, reminders, recommendations, and strong suggestions.

A caution means that a specific action you take could harm your computer or cause you to lose data.

Keyboard Conventions

Control-*x* means to press and hold down the Control key and then press another key.

"Type" in a command procedure means to type the command on the command line and then press the Enter key.

Console Conventions

Commands that you enter at the console, console screen displays, and console prompts are presented in a `typewriter-`style typeface called `courier`:

Commands that you need to type are in **`bold courier`**. If you are instructed to type a console command, for instance, the instructions look something like this:

Type **`so`** at the `login:` prompt.

Output to the console screen is in `plain courier`:

```
WAVSTAR_A: list s
T11   miller   A
T23   stevens  A
T82   allen    B
```

Some console displays shown in this manual are quite long. To make them more understandable, the lengthy console displays have been shortened to emphasize only the most important information. An ellipsis (...) represents portions of the console display not shown in the text.

The console can display each computer's prompt, based on the system ID and the computer's name. Examples in this addendum may use a fictional station and system ID of WAVSTAR. For example, the following is the console prompt for computer A on the WAVSTAR system:

```
WAVSTAR_A:
```

Support

If you are having trouble performing a system operation, you should:

Repeat the procedure, carefully following the instructions provided for the task in this guide.

Check the documentation that came with your hardware for maintenance or hardware-related issues.

Check the Services & Support section of the Avstar web site at `http://www.avstarnews.com` for the latest FAQs, Tips & Techniques, Broadcast Update, and other Avstar online offerings.

Check the Avstar Bulletin Board for information on product and user conferences. If you do not find the solution to your problem, you can exchange information with other Avstar customers and Technical Support representatives.

`http://support.avstarnews.com/~avstar`

Send E-mail to support

`support@avstarnews.com`

Maintenance Agreement contract customers can contact Avstar Technical Support at:

1-800-547-8949 in the USA

44-1753-655999 in Europe

65-476-7666 in Asia/Pacific

Avstar Broadcast Control System Documentation

Avstar (formerly AvidNews) Broadcast Control Workstation User's Guide describes the user-level software functions for BCS.

Avstar (formerly AvidNews) Broadcast Control Workstation online help gives you quick-reference information about user-level software functions.

Avstar (formerly AvidNews) Broadcast Control System Installation Guide provides information on installing and setting up the BCS.

Avstar (formerly AvidNews) Broadcast Control System Release Notes provides installation, administration, and user-level information that may not have been available at the time the other documentation was printed.

MCS Release Notes describe administration and user-level information on how to use the NetStation Machine Control System with the Avstar NRCS.

Documentation Comments

Avstar Systems, LLC continuously seeks to improve its customer documentation. We value your comments about this manual or other Avstar-supplied documentation.

Send your documentation comments by e-mail to Avstar Systems at:

techpubs@avstarnews.com

Include the title of the document, its part number, revision, and the specific section that you're commenting on in all correspondence.

Installing the Louth VDCP

This chapter contains:

An overview of the Avstar Broadcast Control System (BCS)

An overview of the Device Manager (DM) installation process

An Overview of BCS

Avstar BCS

Avstar BCS is a machine control system for on-air operations. BCS can be integrated into the Avstar Newsroom Computer System (NRCS), or into another newsroom computer system. It can also operate in a standalone environment if the NRCS connection is lost.

BCS consists of a server, one or more Broadcast Control Workstations (BCWS), and several device managers. BCS:

Directly controls production devices

Receives information from the Avstar Workstation as control events are entered into scripts

Handles several shows at the same time, enabling shows to be produced back-to-back

Windows-based GUI clients allow technical directors to control events on the Broadcast Control Server.

Avstar NRCS

The Avstar NRCS product set is constructed on a modular, open architecture, enabling its components to work efficiently not only with other Avstar products, but also with third-party hardware and software. Avstar NRCS operates on industry-standard technologies, including Windows® 95 and Windows NT, Intel®-based PCs, Intel and Silicon Graphics® (SGI) servers, and TCP/IP Internet networking protocols.

Avstar Systems is publishing open Applications Programming Interfaces (APIs) for the Broadcast Control System that will enable integration with third-party software and hardware.

Overview of Broadcast Control

After the news staff has scripted stories and entered production cues in the scripts, the producer can download rundowns to BCS using the monitor server in Avstar NRCS.

From the BCWS, the technical director can access the playlists for downloaded rundowns and control associated production devices to play production cues requested.

Figure 1-1 depicts how data flows from Avstar NRCS, through the Avstar Machine Control Protocol (AMCP), to the Broadcast Control Server (BCServer), and then to the devices and BCWS.

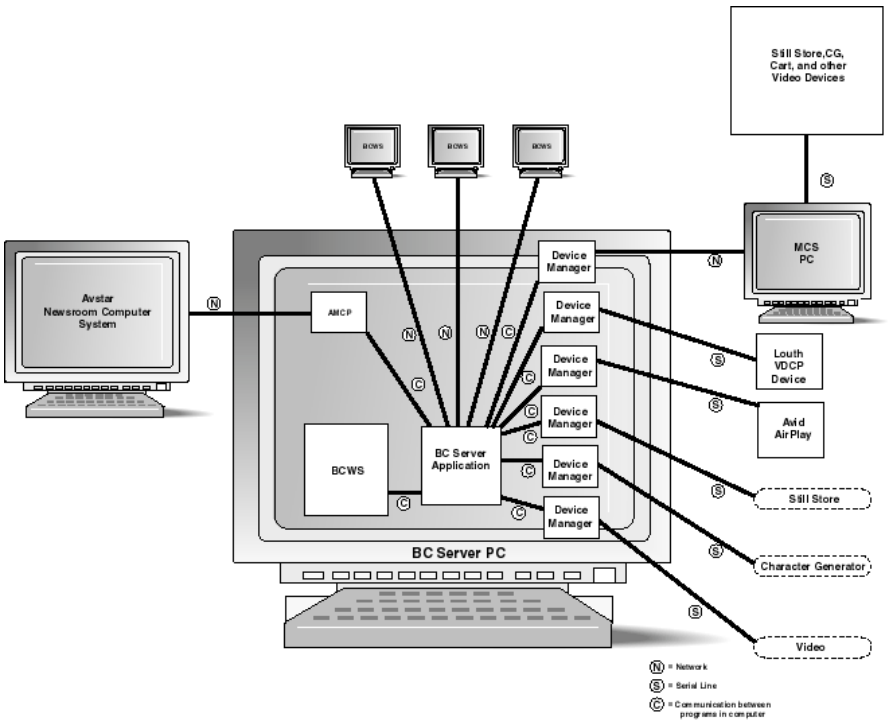


Figure 1-1 Dataflow through BCS

System Architecture

The BCS architecture consists of:

BCServer

- Avstar Machine Control Protocol (AMCP)
- BCS Manager

Device Managers

BCWS

BCServer

The BCServer is an NT server connected to the broadcast production devices. The BCServer:

Routes messages between the AMCP, the device managers, and BCWS clients

Creates and manages the playlists and downloads them to their respective devices

Tracks which clients have playlists and devices reserved

AMCP

AMCP is the interface between NRCS and BCServer. It translates the data coming in from Avstar Newsroom Computer System, or other newsroom computer systems, into data that the BCS can manage.

BCS Manager

The BCS Manager:

Starts the BCS programs

Manages the programs that run on BCServer: AMCP and device managers

Device Managers

The BCWS lets the technical director control the following machines used for broadcast production:

Character generators

Still stores

Video playback devices (such as Avid AirPlay)

BCWS

The BCWS is an application that runs on Windows NT. From the BCWS, the technical director can view playlists and device and event status, and control the broadcast production devices. The BCWS can run on the same machine as the BCServer, or on a separate machine.

Overview of the Setup

To set up BCS:

Perform tasks for initial setup

Add new users to the system

Initial Setup

Setting up the BCS involves doing tasks in three places:

Avstar NRCS Server

BCServer

BCWS

You may need to consult the *AvidNews System Operations Manual* for specific information on the Avstar server or various system operations related to the news server.

Setup Tasks on the Avstar NRCS Server

In `/etc/hosts` file, add the IP address/ethernet address for BCServer(s), devices, and BCWS(s).

If you're upgrading from MCS, you may have to remove device information for machines (CGs, and so on) from the `/site/config` file. See your installation guide for information on what changes to make if upgrading.

Create a monitor server for each show.

In the System Map story, add an entry for each show.

In the System Map story, also add a device list.

Create composite and event list queues.

These tasks are described in subsequent chapters of this book.

Assign a form to the composite and event list queues. This is for viewing these lists on the news system.

Set up the default BCWS form.

In the system resource stories, define styles for device commands.

These tasks are described in subsequent chapters of this book.

Setup Tasks on the Broadcast Control Server

In BCServer `autostart.ini` file, add an entry for each device. This file is in: `Program files/Avid/Broadcast Control System.`

`Add device manager profiles for all production devices.`

`These tasks are described in subsequent chapters of this book.`

Adding New Shows or Devices

After the initial setup, you may need to add shows or new devices to your system. To do this, you will have to do only some of the setup tasks listed above.

Louth VDCP DM

Once BCS has been installed, you must set up the Avstar NRCS server before you can use the system. There are setup tasks that must be performed on the Avstar server at the console, and tasks that must be performed on the Avstar Newsroom Computer System (NRCS) Workstation (the client).

For more information about any Avstar/AvidNews task, see the AvidNews Newsroom Computer System Operations Manual and the *AvidNews Newsroom Computer System User's Guide. For further information on installing and operating BCS, refer to the AvidNews BCS Installation Guide, AvidNews BCS Operations Manual, and the AvidNews BCS User Guide.*

New Features of BCS Components

If channels are being assigned by BCWS and a new playlist is downloaded to the DM, it will report a status of `Available` for each event available on a channel.

If an event is not available on a channel, the status will be `Unavailable`. When the playlist is reserved, BCWS will assign channels; at that point, the DM will report the status of each event on its assigned channel.

However, if channels are assigned by NRCS or by the DM, the event is assigned a channel at download time, and its status is reported relative to that channel.

BCWS New Channel Change Features:

The Broadcast → Channel Override menu entry has been renamed Cycle Channels.

There is a new Broadcast submenu named Change Channel. It contains 10 channels with corresponding accelerator keys 1 through 0. The effect is to change the channel of a selected event directly to a desired channel, rather than cycling through channels to reach the desired channels.

There is a new option on the Channel Policy tab of the Broadcast → Options dialog. It is a check box labeled "Enable Cycle Channels key;" by default it is unchecked. This option allows the user to disable the Cycle Channels key in favor of direct channel change.

Device Profile Files

For each device and device manager (except AirPlay devices), there must be a separate profile. A *profile* is a text file with the extension `.dmp`, which is opened and parsed at start-up. In addition to user-configurable formation, this file must contain the operational name of the device manager and the network name of the BCS computer. The profile can have any name, but it is recommended that you use the name of the device manager.

Multiple instances of any device and its device manager can be run on BCS by launching each with its own `.dmp` file. Whenever you add a device or change its speed or location, you'll need to create or modify the appropriate device profile. Text is case-insensitive. Device profiles are located in the BCS install directory:

```
program files/avstar systems/broadcast control system
```

Format of the profile file is the same as any Windows `.ini` file, with the syntax `<key> = <value>`, and sections for Configuration, Communications, Channels, Dictionary, and CG Character Mapping.

Setting up the Louth VDCP DM

Hardware Requirements

To install and run the Broadcast Control System, you'll need the base equipment detailed on the following table. For a list of qualified PCs, contact your Avstar dealer or call Avstar Technical Support at:

1-800-547-8949 in the USA

44-1753-655999 in Europe

65-476-7666 in Asia/Pacific

For information about hardware installation and system preparation, see the *AvidNews (Avstar) Site Preparation Guide.*

Device Manager Computer

In a typical setup, the Louth VDCP Device Manager (DM) will run on the same computer as the BCServer. Therefore, hardware requirements are identical to those used for the BCServer.

BCServer Hardware

To install and run the BCServer/Louth VDCP Device Manager, you'll need the base equipment detailed in the following table.

Device	Description
CPU	200 MHz Pentium®
Memory	64 MB RAM
Keyboard	104 keyboard
Monitor	15-inch monitor
Video card	SVGA 800x600 or better
Hard drive configuration	2 GB drive
Floppy drive	1.44 MB
Operating system	Microsoft NT 4.0, with a minimum of Service Pack 3
Mouse	Windows-compatible mouse (except Microsoft Intellipoint Mouse)
CD-ROM drive	4X CD-ROM drive

Video Server Requirements

The video server must support the Louth Video Disk Communications Protocol commands listed in Appendix B.

Tektronix Profile PDR-200 - software must be version 2.5.2.6 or higher

Tektronix Profile PDR-400 - software must be version 3.1.1.2 or higher

Cabling

The Louth VDCP DM requires one serial RS-422 connection to a VDCP-compatible device for each channel that it will control. Following are the RS-422 pin-outs for common Video Playback machines such as the Grass Valley Profile PDR, Pluto AirSPACE, and Leitch ASC VR300. The playback device must be configured as a SLAVE device—for a Profile PDR, that means setting the DIP switches for the serial ports DOWN. AirSPACE is SLAVE only.

A 4- or 8-wire RJ-45 terminated straight cable goes from the Equinox module on the BCS Server to the Profile. An RJ-45 modular adapter connects to the video server. The color-codes below are using Inmac RJ-45 modular adapters. Most brands will follow the TELCO standard, but at least one supplier had the colors reversed).

On the BCS Server, we recommend the Equinox SST-64 board with the PM16-RJ/422 Port Module, which has 16 RS-422 ports using RJ-45 sockets. Up to 4 such Port Modules can be attached to each other in series for a total of 64 ports without opening the computer or changing software or driver settings.

NOTE: On the back of the Equinox board is a pin-out diagram. Several manufacturers' documentation conflict over the meaning of symbols like "TX A" and "TX B". Equinox and Digi use "A" to represent "+", while Sony, Profile and AirSPACE (Sony compatibles) use "A" to represent "-". In this document, we will only use the -/+ symbols.

From Equinox RJ45 cable		RJ45 to DB-9 Adapter	DB9	Profile RS-422 port	
n/c	1	n/c			
n/c	2	Blue n/c			
GND	3	Orange	to	1	1 GND (frame ground)
RX -	4	Black	to	2	2 TX -
TX +	5	Red	to	3	3 RX +
not provided				4 RX Common	
not provided				6 TX Common	
TX -	6	Green	to	8	8 RX -
RX +	7	Yellow	to	7	7 TX +
GND	8	Brown	to	9	9 GND (frame ground)
n/c	9	White n/c			
n/c	10	n/c			

(using Frame Ground is optional.)

If you wish to use a DIGI board with a DB25 Octopus cable in place of the Equinox, you can still use the connector and cable described above, with this RJ-45/DB-25 modular adapter on the DIGI Octopus cable:

Digiboard BCS DB25 to RJ-45 adapter pin-outs:

RJ45 cable to BCS Device			RJ45 to DB25 Adapter			DIGIboard DB25 on BCSrvr
n/c	1	n/c				
n/c	2	Blue n/c				
GND	3	Orange	to	1	1	GND
RX -	4	Black	to	16	16	RX -
TX +	5	Red	to	2	2	TX +
TX -	6	Green	to	14	14	TX -
RX +	7	Yellow	to	3	3	RX +
GND	8	Brown	to	7	7	GND
n/c	9	White n/c				
n/c	10	n/c				

Louth VDCP DM Software Configuration

BCServer and BCWS Requirements

To install and operate the Broadcast Control System, you will need:

Windows NT Server 4.0 operating system, with a minimum of Service Pack 3, to install and run the BCServer and BCWS.

LouthDM Profile Options

The LouthDm profile contains four different sections: Configuration, VideoServers, Channels, and Communications.

Configuration Section

The Configuration section contains several different types of keywords:

- The Identification keywords name the device manager and the BCS server to which it connects.
- The Device Control keywords control specific behaviors of the device manager.
- The Logging keywords specify how many log files the device manager will create and where they will be stored.
- The Diagnostic Messages keywords specify which diagnostic messages are displayed on the device manager screen and placed in the log file.

Identification Keywords

DeviceName

The DeviceName keyword specifies the name by which Avstar NRCS can refer to the device manager.

Example: DeviceName=louth

BCSHostName

The BCSHostName keyword specifies the hostname of the computer running BCServer.

Example: BCSHostName=localhost

Device Control Keywords

NumberOfChannels

Specify the number of channels that the device manager will control with the NumberOfChannels keyword.

Example: NumberOfChannels=4

AutoCueDelay

The AutoCueDelay keyword specifies how many seconds to wait after a video clip has finished playing before cueing the next clip on that channel. If the keyword is absent, there is no delay.

Example: AutoCueDelay=0

DisableAutoCue

The DisableAutoCue keyword can be used to prevent the device manager from automatically cueing the next clip after a clip has ended. The default is to enable auto-cueing.

Example: DisableAutoCue=No

CueReplacesPlayingEvent

To make a Cue request on a channel stop any playing event on that channel, set the CueReplacesPlayingEvent keyword to Yes. If the keyword is set to No or is absent, a Cue request will put the new event into Standby status until the playing event ends, at which point the new event would be cued.

Example: CueReplacesPlayingEvent=No

ChannelPollInterval

Check at this interval (measured in seconds) to see if any channels that are offline can be brought back online. The default is 10 seconds.

Example: ChannelPollInterval=10

CanPlayTransferringMedia

CanPlayTransferringMedia indicates whether or not the DM should allow a transferring clip to be played. The default value is No, in which case a transferring clip cannot be played. Once the transfer is finished, the clip can be played. If you specify Yes, then the DM allows a transferring clip to be played.

Example: CanPlayTransferringMedia=No

SignalStartOfTransfer and SignalEndOfTransfer

SignalStartOfTransfer and SignalEndOfTransfer provide for signalling behavior only if the CanPlayTransferringMedia key is set to Yes. SignalStartOfTransfer tells the DM to send a message to BCS on detection of a clip that is transferring. This gives you feedback that the clip is playable, but it may not be safe to do so. SignalEndOfTransfer tells the DM to send a message to BCS on detection that a clip transfer has finished. At this point the clip is safe to play. The default value for both of these keys is Yes; that is, messages will be sent to BCS at both the start and end of each transfer. The messages will appear in the Error Log dropdown list in BCWS and in the Message bar in ASWS.

Examples:

SignalStartOfTransfer=Yes

SignalEndOfTransfer=Yes

Logging Keywords

LogFileDirectory

To specify the directory in which log files are created, use the LogFileDirectory keyword. You can specify either an absolute or relative path to the directory. This option is required. WARNING: If more than one instance of LouthDM will be running on the same computer, they must have different log file directories.

Example: LogFileDirectory=logs\LouthDM

NumberOfLogFiles

To specify the maximum number of log files that will be created, use the NumberOfLogFiles keyword. If it is not specified, the LouthDM will create at most 10 log files.

Example: NumberOfLogFiles=10

StartLoggingOnProgramStart

The StartLoggingOnProgramStart keyword indicates whether the LouthDM should start logging immediately upon starting up, or should wait until the user explicitly starts logging using the Logging / Start Logging menu option. The default is to start logging immediately.

Example: StartLoggingOnProgramStart=Yes

Diagnostic Messages Keywords

The diagnostic message keywords come in pairs: Report<messagetype> and Report<messagetype>Details. Each takes a Yes or No. To specify Yes on a "details" keyword, you must also specify Yes on the "general" keyword for that message type. If no keywords are specified, the defaults are:

ReportOnAirControl=Yes

ReportPlaylistManagement=Yes

ReportErrors=Yes

All others=No

ReportOnAirControl and ReportOnAirControlDetails

OnAirControl messages occur whenever a Play, Stop, Cue, Pause, or Channel Change command is received from BCWS.

Examples:

ReportOnAirControl=Yes

ReportOnAirControlDetails=Yes

ReportPlaylistManagement and ReportPlaylistManagementDetails

PlaylistManagement messages occur whenever an event or story is added to, deleted from, or moved in the playlist.

Examples:

ReportPlaylistManagement=Yes

ReportPlaylistManagementDetails=No

ReportEventStatusChange and ReportEventStatusChangeDetails

EventStatusChange messages describe changes in the status of individual events.

Examples:

ReportEventStatusChange=No

ReportEventStatusChangeDetails=No

ReportDeviceStatusChange and ReportDeviceStatusChangeDetails

DeviceStatusChange messages describe changes in the status of the VDCP-compatible device being controlled by the device manager.

Examples:

ReportDeviceStatusChange=No

ReportDeviceStatusChangeDetails=No

ReportErrors and ReportErrorsDetails

Error messages describe situations where the device manager could not perform an action or a status changed unpredictably.

Examples:

ReportErrors=Yes

ReportErrorDetails=No

ReportVDCPData and ReportVDCPDataDetails

VDCP messages report the Louth protocol message bytes sent to and received from each video server.

Examples:

ReportVDCPData=No

ReportVDCPDataDetails=No

DisplayVDCPDataOnScreen

DisplayVDCPDataOnScreen enables the device manager to display the VDCP messages on its display. Because there are so many VDCP messages sent, the default is not to display these messages on the display. The messages will still get put in the logfile even if they are not displayed on the device manager screen.

Example: DisplayVDCPDataOnScreen=No

VideoServers Section

This section contains keys Server1, Server2, etc., one for each physical machine being controlled by the device manager. A video server is specified by a line of the form Server<n>=<name>:Chan<n1>:Chan<n2>:... where:

- <name> is an identifier for the physical machine (e.g., its host name), and
- <n1>, <n2>, ... are the numbers from the [Channels] section that indicate the channels on that machine.

Examples:

Server1=PDR001:Chan1:Chan2

Server2=PDR002:Chan3:Chan4

Channels Section

A channel is specified by a line of the form

Chan<NRCSChannel>=<Name>:<VideoPort>:<SerialLine>

where:

- <NRCSChannel> is a number (1, 2, ...); this is the channel number used by Avstar NRCS
- <Name> is a string containing any character except a colon; this is the name of the channel displayed in BCWS;
- <VideoPort> is a number 1, 2, ...; this is the video port of the Louth video server to associate with this channel;
- <SerialLine> is one of the names for a serial line in the [Communications] section.

Examples:

Chan1=A:1:Serial1

Chan2=B:2:Serial2

Chan3=C:1:Serial3

Chan4=D:2:Serial4

Communications Section

The Communications section specifies details of the serial communication to the Louth-compatible device. There are two keywords: Serial<n> (n=1,2,3,…) and SerialOfflineInterval.

A serial port is specified by a line of the form:

- Serial<n>=<comm port>:<baudrate>:<bitcount>:<parity>:<stopbits>

The Louth protocol specifies that the baud rate is 38400, the bit count is 8, the parity is odd, and there is one stop bit.

Examples:

Serial1=com3:38400:8:o:1

Serial2=com4:38400:8:o:1

Serial3=com5:38400:8:o:1

Serial4=com6:38400:8:o:1

The SerialOfflineInterval keyword specifies a timeout interval. If a serial line does not respond to a command within this number of milliseconds, it is assumed to be offline. The default is 2000 milliseconds.

Example: SerialOfflineInterval=2000

Complete Profile File Example

The required elements of the profile file are in bold; all other elements are optional.

```
;-------------------------------------------------
[Configuration]
DeviceName=louth
BCSHostName=localhost
NumberOfChannels=2
AutoCueDelay=0
DisableAutoCue=No

LogFileDirectory=logs\LouthDM
NumberOfLogFiles=10
StartLoggingOnProgramStart=Yes

ReportOnAirControl=Yes
ReportOnAirControlDetails=Yes
ReportPlaylistManagement=Yes
ReportPlaylistManagementDetails=No
ReportEventStatusChange=No
ReportEventStatusChangeDetails=No
```

ReportDeviceStatusChange=No
ReportDeviceStatusChangeDetails=No
ReportErrors=Yes
ReportErrorDetails=No
ReportVDCPData=No
ReportVDCPDataDetails=No
DisplayVDCPDataOnScreen=No

CueReplacesPlayingEvent=No
ChannelPollInterval=10

CanPlayTransferringMedia=No
SignalStartOfTransfer=Yes
SignalEndOfTransfer=Yes

;---
[VideoServers]
Server1=PDR001:Chan1:Chan2
Server2=PDR002:Chan3:Chan4

;---
[Channels]
Chan1=A:1:Serial1
Chan2=B:2:Serial2
Chan3=C:1:Serial3
Chan4=D:2:Serial4

;---
[Communications]
Serial1=com3:38400:8:o:1
Serial2=com4:38400:8:o:1
Serial3=com5:38400:8:o:1
Serial4=com6:38400:8:o:1

SerialOfflineInterval=2000

Using the Louth VDCP DM

This section tells you how to use the Louth Video Disk Control Protocol (VDCP) Device Manager (DM).

(Refer to the *Tektronix Profile User Guide* for detailed information on the Profile VdrPanel setup.)

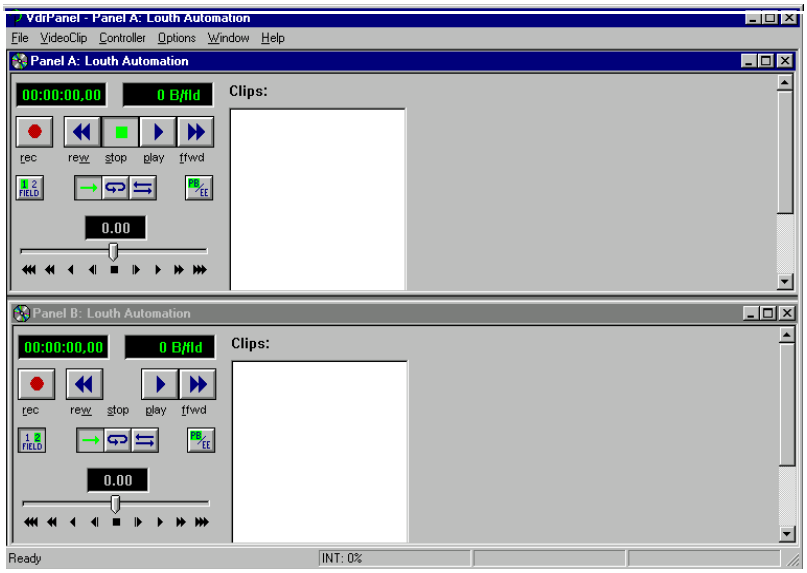
Setting up the Louth VDCP DM to Run

The following program must be running before you can set up the Louth VDCP Device Manager:

`Bcserver.exe`

Connecting to the Tektronix Profile

The PDR must be running VdrPanel for the Louth VDCP DM to connect to it. VDR panel must have one panel open for each channel that will be controlled by the DM, with each panel running the Louth Automation protocol. To set this up, run VdrPanel. (VdrPanel provides you with a VTR-like interface, complete with transport controls, to directly manage media operations.) (Refer to the *Tektronix Profile User Manual* for further VdrPanel setup instructions.)



VdrPanel

To set up the PDR for connecting to the Louth VDCP Device Manager (DM):

VdrPanel

Select the VdrPanel menu item Window → Open Panel....

Select the menu item Controller → Select....

Choose Louth Automation and press OK to set the panel's controller.

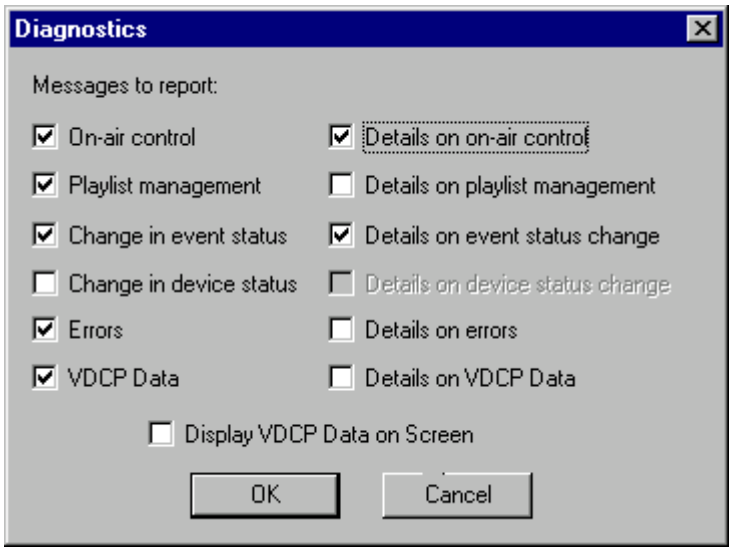
Select Controller → Comm Port... to set the COM port for the Louth Automation protocol.

Select Video → Video Crosspoint... to set up the output channel associated with each panel.

Louth VDCP DM Profile File Diagnostics

The Louth VDCP DM can report various status messages. To set the status message types, set the diagnostic message keywords in the profile file. (Refer to the "Louth VDCP Configuration File Example" in Chapter 2 for an explanation of the keywords to set up diagnostic messages.) To change the message types at run-time, open the View menu and select the Diagnostics... entry.

A dialog opens:



Each message type has two levels of detail, indicated by the two columns. The "high level" is in the left column. If the "On-air control" check box is checked (enabled) as shown, then the Louth VDCP DM will report a message every time it receives a Cue, Play, or Stop command. If the "Details on on-air control" box is checked, it will further report which event is being controlled. If a box in the left column is not checked, the corresponding box in the right column is grayed out; you cannot request details on a message without requesting the message. Changes made in the dialog are in effect only while the program is running. To make these changes persistent across sessions, change the corresponding keyword settings in the profile file. (Refer to the "Louth VDCP Configuration File Example" in Chapter 2 for an explanation of the keywords.)

Logging

Messages reported to the Louth VDCP DM screen can also be captured in a log file. Choose Logging → Start Logging to start capturing messages into a log file. Choose Logging → Stop Logging to stop logging if logging is already active. (Refer to the Chapter 2, "PDR Configuration File Example," for an explanation of the keywords to set up logging.)

By default, no more than 10 log files will be created by the program, named:

```
000.txt
....
009.txt
```

You can change the number of log files in the setup procedure. Any information reported to the screen will be transferred to the log file(s) specified.

The profile file keyword `StartLoggingOnProgramStart` sets the application to start logging immediately.

Running the Program

To run the Louth VDCP DM program:

Click on the LouthDM icon in Explorer.

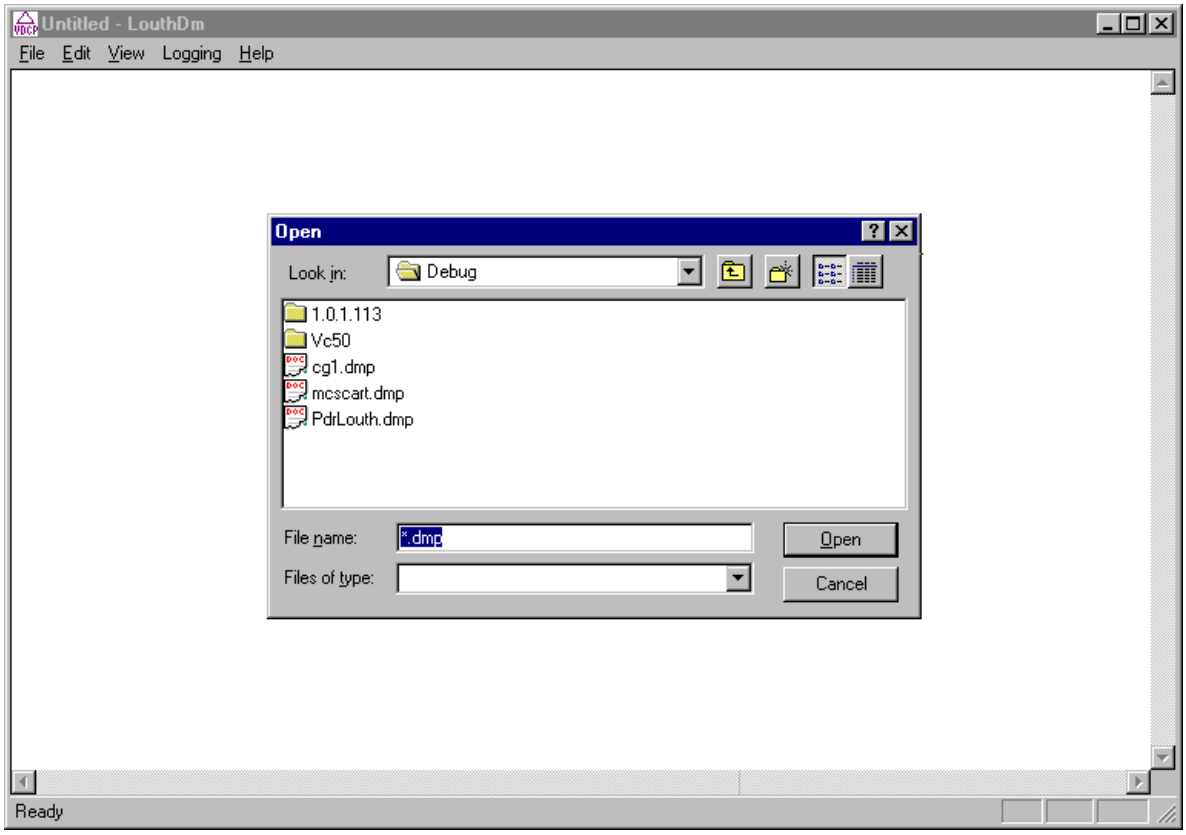
-OR-

Type **`louthdm`** at a command prompt. A profile file can be specified on the command line; for example:

```
louthdm file.dmp
```

If a file is not specified, an open dialog will prompt you to choose a profile file. After the Louth VDCP Device Manager is started, it can be run unattended.

To exit the Louth VDCP DM program, select the menu item File→Exit.



Louth VDCP Device Manager (Running)

Louth VDCP DM Error Messages

The following table describes Louth VDCP DM error messages.

Error Message	*Description*
<<<Received Msg -- Message Type = %s - NOT TRAPPED	The DM received a message from BCServer that it does not know how to handle.
Can't establish connection to any channel. Good Bye!	The DM cannot connect to any specified channel. Check the Profile file, the serial connections, and the VDCP server to make sure everything is correctly configured.
Can't establish connection to the server. Good Bye!	The DM cannot connect to the BCServer. It must be restarted.
Channel '<channelname>' is back online	Channel was offline and is now online again
Channel '<channelname>' is offline	Channel went offline. Check the VDCP server setup and serial connections.
Could not Cue event on the specified channel	DM could not find the channel on which to cue the event.
Could not Play event on the specified channel	DM could not find the channel on which to play the event.
Could not Stop event on the specified channel	User tried to stop an event and the device told the DM the attempt failed.
Cue of event '<eventname>' failed on channel '<channelname>'	A clip that the user tried to cue could not be cued.
DEVICE: Channel <name> is back online	The channel named <name> was offline but has been brought back online.
Error Connecting to Channel :<name>	The DM could not connect to the specified channel. Check the Profile file, the serial connections, and VDCP server (on the PDR, VdrPanel) to make sure everything is correctly configured.

Error getting duration from device	The DM could not determine a clip's duration.
Error getting position	The DM could not determine the amount of time remaining on a playing clip.
Error reading Communications section of Profile file	The DM could not read the [Communications] section of the Profile file.
Error reading Configuration section of Profile file	The DM could not read the [Configuration] section of the Profile file.
Error reading VideoServers section of Profile file	The DM could not read the [VideoServers] section of the Profile file.
ERROR: At least one thread used for channel control failed to start	The DM could not start all the threads it needs to control the VDCP-compatible device.
ERROR: Channel #X is not assigned to any video server in the [VideoServers] section of the Profile file.	Every channel must be assigned to some video server.
ERROR: Invalid channel 'ChanX' specified on line '<line>' of the [Video Servers] section of the Profile file. There are only Y channels.	The channel number X must be between 1 and Y, inclusive.
ERROR: Line '<line>' in the [VideoServers] section of the Profile file contains no video server name.	Each line in the [VideoServers] section must contain a video servername.
ERROR: Line '<line>' in the [VideoServers] section of the Profile file has no channels specified.	At least one channel must be specified for each video server.
ERROR: Line '<line>' in the [VideoServers] section of therofile file has a bad channel specification: <spec> (should be of the form "ChanX").	A channel is specified by a string of the form "ChanX", where X is a number.
ERROR: The Profile file does not contain a [VideoServers] section.	The Profile file must contain a [VideoServers] section.
Event failed to play.	The DM was unable to play an event the user tried

	to play.
EVT_STATUS: The clip '<clipname>' on the video server '<servername>' may not be safe to play.	The DM has detected that the clip is transferring to the video server and is not completely present. Playing it may yield unpredictable results.
EVT_STATUS: The clip '<clipname>' on the video server '<servername>' is now safe to play.	The DM has detected that a clip that was transferring to the video server has finished transferring.
Invalid channel assignment.	The DM received a Play command for an event with a bad channel assingment.
Missing BCS host name. Check Profile...	The [Configuration] section of the Profile file does not specify the computer running the BCServer.
Missing channel configuration. Check Profile...	The [Channels] section of the Profile file is missing.
Missing device name. Check Profile...	The [Configuration] section of the Profile file does not specify the device name.
Missing number of channels. Check Profile...	The Profile file does not specify how many channels the device has.
Missing serial configuration. Check Profile...	The [Communications] section of the Profile file is missing a Serial setup that is referenced in the [Channels] section.
No channel assigned for selected event	User tried to cue or play an event that had not been assigned to a channel.
The clip '<clipname>' is not on these channels: <channel1 ...>	DM checked all channels for the clip and is reporting the channels that lack the clip.
The detail diagnostic keyword 'Report<messagetype>Details' cannot be set to Yes unless the general diagnostic keyword 'Report<messagetype>' is also set to Yes.	To have details on a message type reported, user must tell the program to report the message type, as well as its details.
The Profile file must specify a log file directory using the LogFileDirectory keyword.	The user must put:

	LogFileDirectory=<directory> in the Profile file, with an appropriate value for <directory>.
Unable to cue event '<clipname>' for playing	User tried to play an uncued event, and the DM could not cue the event prior to playing it.
Unable to open the Profile file '%s'	DM cannot open the specified Profile file. Check the name and path.

Required Louth VDCP Commands

The Louth VDCP Device Manager uses the following Louth VDCP commands. Any video server controlled by the device manager must support these commands.

Required Louth VDCP Commands

Command	Description
1X.00	Stop
1X.01	Play
1X.04	Still
1X.06	Continue
2X.21	Close Port
2X.22	Select Port
2X.24	Play Cue
3X.01	Open Port
3X.02	Next
3X.05	Port Status Request
3X.06	Position Request
3X.11	ID List
3X.14	ID Size Request
3X.16	ID Request
3X.18	IDs Added List
3X.19	IDs Deleted List

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Ref: C97029a

Canadian ICES-003

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Declaration of Conformity (according to ISO/IEC Guide 22 and EN 45014)

Application of Council Directives: 73/23/EEC, 89/336/EEC. Standards to which Conformity is Declared: EN 60950: 1992 + A1, A2: 1993, IEC950: 1992 + A1, A2: 1993 Mod., CISPR 22:1985 / EN 55022:1988 Class A (1), EN 50082-1, IEC801 -2, -3, -4. Manufacturer's Name: Avid Technology Inc., 1925 Andover Street, Tewksbury, MA 01876, USA. European Contact: Nearest Avid Sales and Service Office or Avid Technology Int'l B.V., Sandyford Business Center, Unit 3, Dublin 18, Ireland. Type of Equipment: Information Technology Equipment. Product Name: Avid Editing System, PCI Media Composer, MCXpress for Macintosh, Film Composer. Base Model Numbers: 400S, 800, 900, 1000, 4000, 8000, MC Offline, Media Station. Product Options: All. Year of Manufacture:1997. (1) The product was tested in a typical Avid Media Composer configuration.

I the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

George R. Smith, Quality Manager Ref: C97029a, C97030a

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